paper board packaging

October 1984/$2.00

ANNUAL STATE OF THE CORRUGATED INDUSTRY REPORT

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Computerization in the Box Plant

Folder-Gluer News

How the New Tax Act Affects You

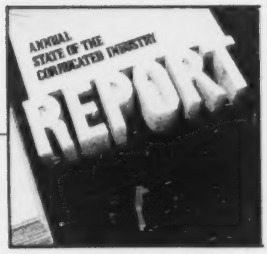
AN HBJ PUBLICATION

paper board packaging

OCTOBER 1984, VOLUME 69, NO. 10

On the Cover:

Paperboard Packaging presents the first of what will be an annual supplement, sponsored by The Harper Companies, on the state of the corrugated container industry.



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by Mark Arzoumanian

This family-run rigid box plant values its workers, quality, and the need to modernize its machinery to stay competitive.

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by Eric M. Malstrom & Joseph Lane Sr.

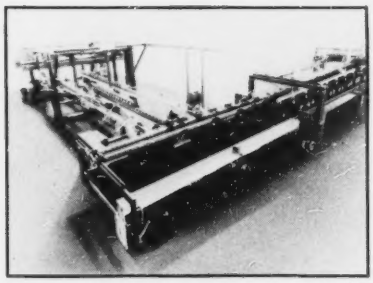
A university engineering professor, plant management and a representative of a conveyor manufacturer collaborated on a plant expansion that is already producing dividends.

COMPUTERS

50 **Computerization In the Box Plant**

by Robert Gitlin

Whether in the office or down on the production floor, computer systems have made their indelible imprint on the direction the boxmaking field will now be taking.



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STATE OF THE ART

58 **What's Unfolding In Folder-Gluers?**

Whether a plant is converting corrugated containers or folding cartons, management should know about new and ongoing developments in this veteran piece of finishing equipment.

(continued on page 4)

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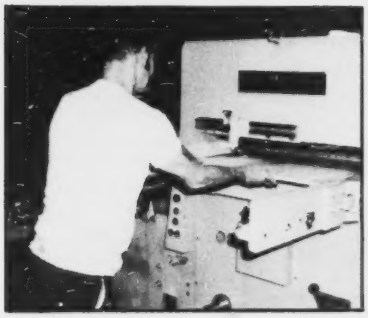

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by Richard Weatherington

Seeing three big tax bills pass Congress in four years, many converters struggle to position themselves securely. Beware: a simple miscalculation could cost you dearly.

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A Minneapolis sheet plant is the first in the U.S. to discover that the Autopress nicely meets its needs in an efficient, compact manner.

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December: Industry Calendar/Package Designing

January: Industry Forum/Equipment Status

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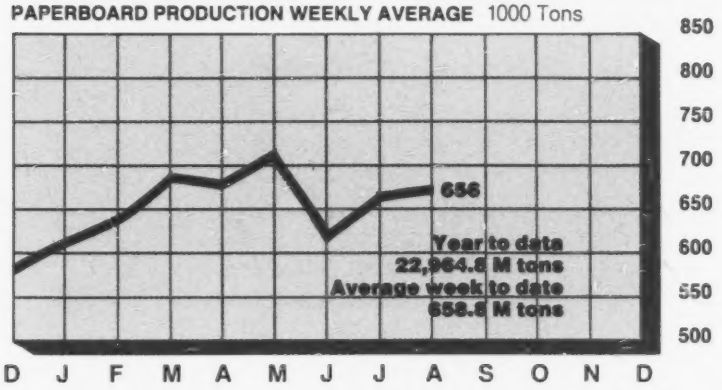
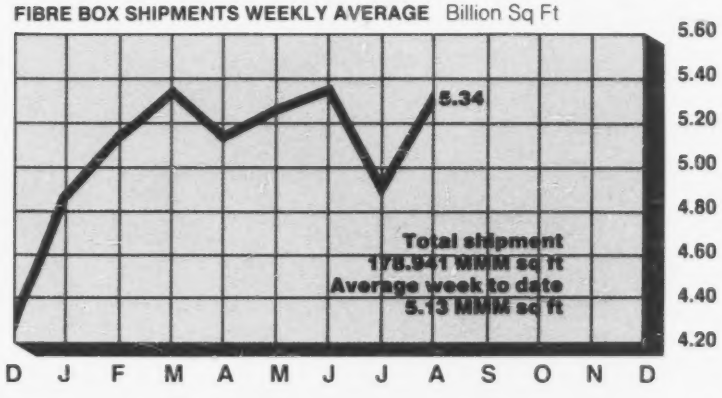
INDUSTRY
STATISTICS FOR 1984

PAPERBOARD PRODUCTION WEEKLY AVERAGE 1000 Tons



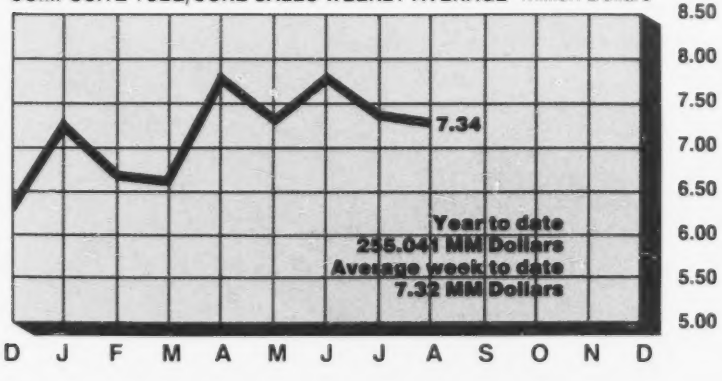
PAPERBOARD MILL OPERATIONS:
The first two-thirds of 1984 ended with an average-week board output that was 9.0% higher than the previous year's level, compared with a rise of 7.4% in 1983 from 1982, and a drop of 9.8% in 1982 from 1981, and a rise of 3.8% in 1981 from 1980, and a drop of 0.7% in 1980 from 1979. In short, this trend illustrates the "averaging out" of industry expansion; a year or two of production growth followed by one or two of decrease, and now and then an "average" compensating year. However, an expanding margin of output suggests that present strength will continue in 1985.

FIBRE BOX SHIPMENTS WEEKLY AVERAGE Billion Sq Ft



PAPERBOARD-TYPE PRODUCTION:
In August, the total board volume figure of 2906.6 M. tons—6% higher than the figure from last year—comprised 2166.2 M of containerboards—up 6.2%—and 740.4 M of boxboards—5.4% up—as projected on historical basis from the American Paper Institute's "production by furnish" reports. This depicts the relatively high vigor of containerboard grades in a resurging market, though the boxboards also are well above an average annual advance. A more realistic comparison is with the "normal" year of 1981—August-end volume is up 4.7% from '81.

COMPOSITE TUBE/CORE SALES WEEKLY AVERAGE Million Dollars



RIGID PAPER BOXES:
A satisfactory performance up to what normally is the summer doldrums has been followed by a strange failure of setup box activity to recover fully from the latter slowdown period. Rigid box billings entered the final third of 1984 with half of the NP&PA regions reporting a decline from last year, and an overall total only minutely up. Geography again continues to produce variations ranging from improvements above 100% in some local sectors to deep double-digit drops in others—though this veteran box form shows an averaging out, over the years, in its regional fortunes.

Management figures at corrugated container plants throughout the United States respond to a survey's questions regarding overall operating considerations.

Statistics Tell Management Story

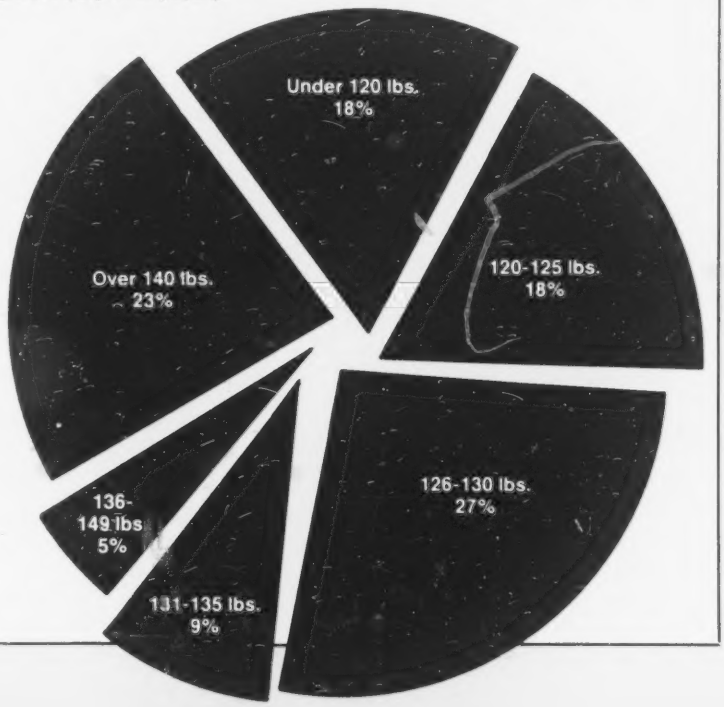
The Corrugated Containers State of the Industry Report would not be complete without good old numbers to back it up and to reflect some of the attitudes key management figures have these days. The following is a graphic presentation of most of the findings we came up with, using Infometrics, the research arm of HBJ Publications Inc., Duluth, Minn.; followed by a written wrap-up of what some of the open-ended questions appear to mean.

We surveyed combiner and sheet plants all through the United States to produce these data. All figures represent combinations of the data for combiner and sheet facilities. Most of what we are reporting here, we are doing so with mean (average) figures and percents of totals.

Suffice it to say that our coverage was exhaustive and our results, we feel, stimulating. The bar graphs, pie charts and tables speak for themselves. The rest requires some discussion, which you'll find afterwards.

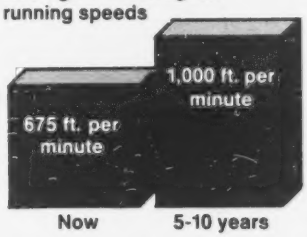
Paperboard packaging equipment and materials census

In terms of basis weight scale, what percentage of your total containerboard consumption is in each of the following weight ranges (pounds/sq. ft. of paper)?



What percentages of single, double, and triple wall do you utilize?

Average #1 corrugator running speeds



Please think about price, quality and service as being the most important considerations when either maintaining present machinery or purchasing new equipment.

PERCENTS OF TOTAL

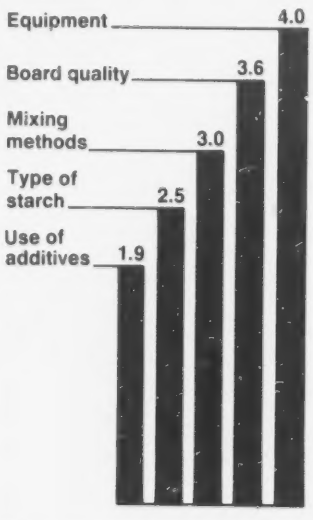
	Extremely important	Very important	Fairly important	Not very important	Not at all important
Price	21.6	43.2	35.2	—	—
Quality	76.6	22.5	.9	—	—
Service	62.2	33.3	4.5	—	—

Now think about the elements of paper, adhesives, and people as they play roles in cost considerations in your operation.

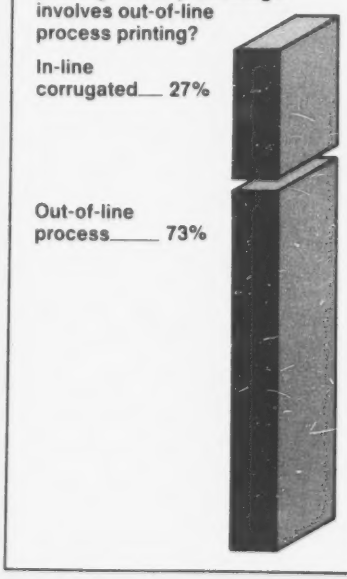
PERCENTS OF TOTALS

	Extremely important	Very important	Fairly important	Not very important	Not at all important
Paper	51.0	40.4	6.7	1.9	—
People	79.6	16.5	2.9	1.0	—
Adhesives	16.3	40.8	31.6	8.2	3.1

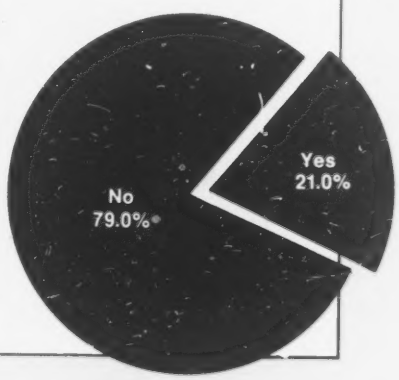
What factors, in order of importance, affect starch consumption. (Most important = 5; least important = 1.)



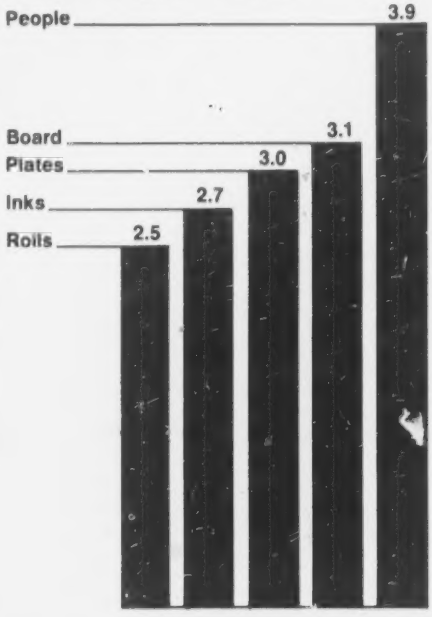
What percentage of your work involves in-line corrugated printing? What percentage involves out-of-line process printing?



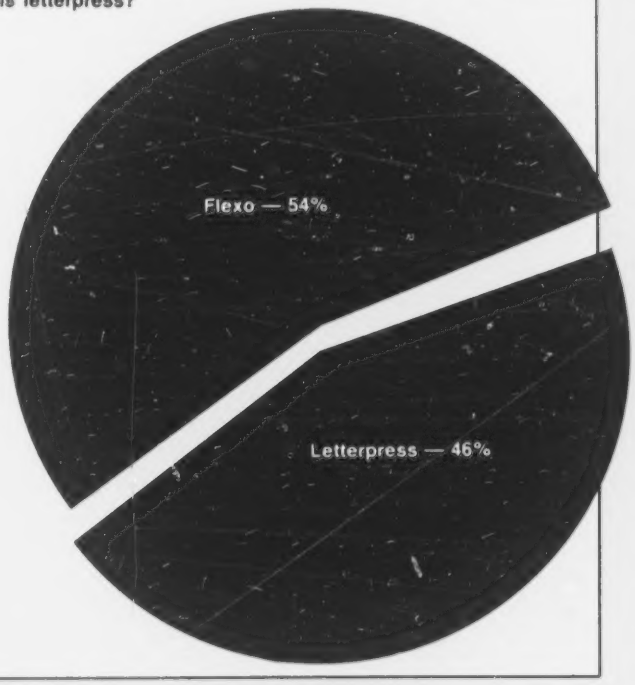
Are you currently using color coatings?



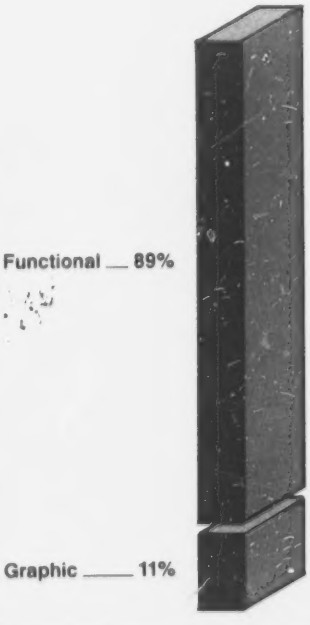
On a scale of 1 to 5, 5 being most important, rank the following troubleshooting considerations.



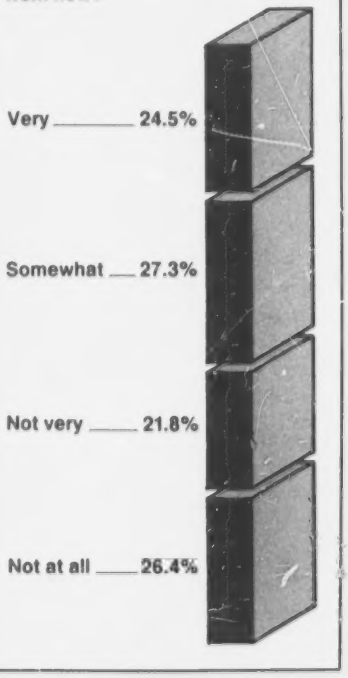
What percentage of your ink rolls is flexo and what percentage is letterpress?



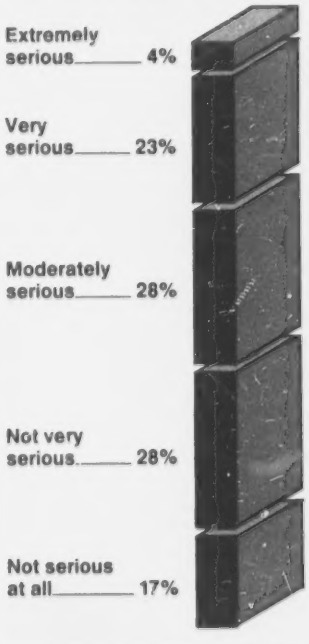
What percentage of your coatings are functional? Graphic?



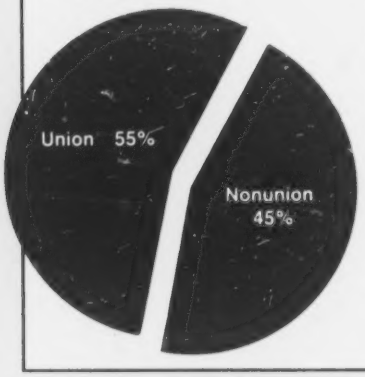
How likely will you be to purchase preprinted linerboard 3 years from now?



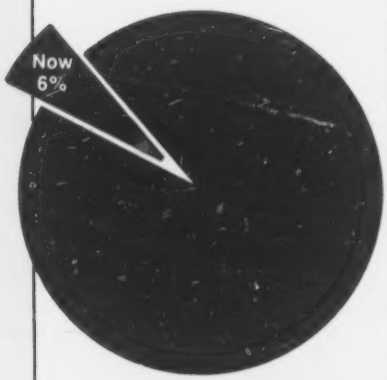
How serious a problem are speed limitations due to linerboard and medium?

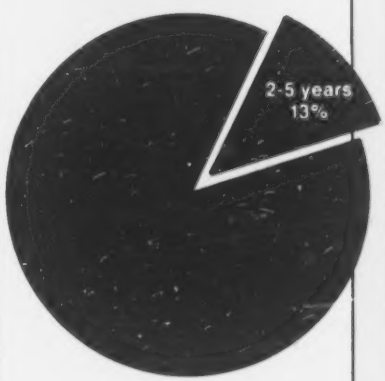


What percentage of your labor force is union? nonunion?



What percentage of your production is in display work? In 2-5 years?





For each of the following types of personnel, please indicate the number of persons holding this title at your plant, and the most representative hourly rate of pay associated with a particular title.

TITLE	# OF EMPLOYEES	HOURLY RATE
Corrugator Crew	16.73	$9.00
Corrugator Supervisor	2.91	$12.00
Die cutter Operator	3.03	$7.87
Maintenance Supervisor	1.38	$12.00
Off-bearing personnel	6.91	$7.67
Starch Person	2.21	$8.69
Folder-Gluer Operator	2.97	$8.18
Press Operator	3.39	$7.92
Printer-Slotter Operator	2.66	$8.06
Diemaker	1.83	$9.05
Platemakers	1.40	$8.78
Production Supervisor	4.02	$11.00

How likely are you to be producing preprint linerboard during the next 3 years?